

Claims:

1. An evaluation board for evaluating one or more aspects of a surface mount technology system, the board comprising:
 - (a) a substrate having a surface;
 - 5 (b) a plurality of board pad patterns formed on the surface, wherein each of the board pad patterns includes a plurality of board pads.
2. The evaluation board of claim 1, wherein in each of said board pad patterns, the board pads have a uniform shape, size and pad-to-pad spacing.
- 10 3. The evaluation board of claim 1, wherein the size of board pads of at least some of the board pad patterns differs from the size of board pads in at least some of the other board pad patterns.
4. The evaluation board of claim 2, wherein the size of board pads of at least some of the board pad patterns differs from the size of board pads in at
15 least some of the other board pad patterns.
5. The evaluation board of claim 1, wherein the pad-to-pad spacing of board pads of at least some of the board pad patterns differs from the pad-to-pad spacing of board pads in at least some of the other board pad patterns.
6. The evaluation board of claim 3, wherein the pad-to-pad spacing of
20 board pads of at least some of the board pad patterns differs from the pad-to-pad spacing of board pads in at least some of the other board pad patterns.
7. The evaluation board of claim 1, wherein at least some of the board pad patterns are arranged in a matrix wherein the size of board pads in adjacent board pad patterns progressively changes.
- 25 8. The evaluation board of claim 1, wherein at least some of the board pad patterns are arranged in a matrix wherein the pad-to-pad spacing of board pads in adjacent board pad patterns progressively changes.

9. The evaluation board of claim 7, wherein at least some of the board pad patterns are arranged in a matrix wherein the pad-to-pad spacing of board pads in adjacent board pad patterns progressively changes.
10. The evaluation board of claim 1, wherein at least some of the board pads patterns are arranged in a two dimensional matrix having rows and columns of board pad patterns, and wherein in each row of the matrix, a first characteristic of the board pads in the board pad pattern is varied and wherein in each column of the matrix, a second characteristic of the board pads in the board pad patterns is varied.
- 10 11. The evaluation board of claim 10, wherein the first characteristic is selected from the group consisting of: the shape; size; and pad-to-pad spacing of the board pads, and wherein the second characteristic is chosen from the group consisting of: the shape; size; and pad-to-pad spacing of the board pads, and wherein the first and second characteristics are different.
- 15 12. The evaluation board of claim 1, wherein the substrate has two surfaces and wherein each surface has a plurality of board pad patterns formed on it.
13. The evaluation board of claim 1, wherein the substrate has two surfaces and wherein the first surface has a plurality of board pad patterns formed of board pads and wherein the second surface has a plurality of area-filled board pads.
- 20 14. An evaluation board for evaluating one or more aspects of a surface mount technology system, the board comprising:
- (a) a substrate having a surface;
 - 25 (b) a plurality of board pad patterns formed on the surface, wherein each of the board pad patterns includes one of: an area-filled board pad or a plurality of board pads.
15. The evaluation board of claim 14, wherein each of the board pad patterns includes an area-filled board pad and the size of the area-filled board

pad of at least some of the board pad patterns differs from the size of board pads in at least some of the other board pad patterns.

16. The evaluation board of claims 14, wherein each of the board pad patterns includes an area-filled board pad and the pad-to-pad of successive
5 area-filled board pads differs from the pad-to-pad spacing of area-filled board pads in at least some of the other board pad patterns.

17. The evaluation board of claim 15, wherein at least some of the board pad patterns are arranged in a matrix wherein the size of area-filled board pads in adjacent board pad patterns progressively changes.

10 18. The evaluation board of claims 16, wherein at least some of the board pad patterns are arranged in a matrix wherein the pad-to-pad spacing of area-filled board pads in adjacent board pad patterns progressively changes.